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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kai Narvanen

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PERMAN & GREEN
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EXAMINER

DAVIS, CYNTHIA L

ART UNIT

PAPER NUMBER

2665

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,954

Applicant(s)

NARVANEN ET AL.

Examiner

Cynthia L. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/14/2005 have been fully considered but they are moot in view of the new grounds of rejection.
2. Regarding claim 8, the Gossman reference is from the same field of art (cellular communications) as Sayers, and hence the two are combinable.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-7 and 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Sayers.

Regarding claim 1, a telecommunications system which comprises an office network, and operator network, and a LAN between them is disclosed in Sayers, figure 2, elements 22, 29, and 24. The office network comprising at least one mobile system terminal is disclosed in figure 2, element 4. A base transceiver station is disclosed in figure 2, element 27. A radio access gateway controlling the base transceiver station and adapted to have a functional connection with the local area network and configured to adapt the data transmission protocols of said mobile system and local area network to each other is disclosed in column 9, lines 33-45, and figure 2, elements 42 (the

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gateways). A call control entity which is configured to control said radio access gateway through a signaling connection and arranged to detect the establishment of an internal connection in the office network, which data connection uses a GSM protocol is disclosed in figure 2, element 29 and column 9, lines 37-40 (the overall connection unit, which consists of a hub and router that control communication between the private BTSs and the gateways) and column 9, lines 54-58 (the private and public networks both use GSM). An interworking function is disclosed in column 18, lines 56-60. A signaling connection from said call control entity being arranged is disclosed in figure 2, elements 29, 28, and 4 (there are signaling connections between the connection unit and the private mobiles via the private BTSs). Which interworking function being configured to adapt GSM connections coming from the radio access gateway to the data protocol according to said office network, in response to the call control entity detecting the establishment of an internal data connection in the office network, at least the second party of the GSM connection being said GSM terminal, the call interworking function being further configured to route the GSM connections to their destination address in the office network, and the operator network is configured to adapt data transmission between the office network and a public land mobile network together is disclosed in column 18, lines 56-60, figure 2, element 29 (the connection unit connects in both directions between the public and private networks), and column 9, lines 54-58 (the private and public networks both use GSM). That the GSM connections are data calls is not specifically disclosed in Sayers. However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It

would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GMS connection for a purpose for which it was designed.

Regarding claim 2, a location database for registering terminals belonging to the office network and for managing location and subscriber information is disclosed in column 5, lines 1-12. The call control entity being configured to authenticate the subscriber of the terminal in response to a data connection establishment request made by the terminal is disclosed in column 5, lines 23-34. Directing the radio access gateway to route the data connection to said interworking function in response to said subscriber of the terminal being registered into the office network is disclosed in column 19, lines 57-column 20, line 55 (if a subscriber is registered, the call is handled in the private network, which includes the interworking functionality). Directing the radio access gateway to route the data connection through the operator network to a switching center of the public land mobile network in response to the fact that the subscriber is not registered into the office network is disclosed in column 21, lines 8-18 (the call is routed to the P-BTS serving the public mobile station). That the GSM connections are data calls is not specifically disclosed in Sayers. However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GMS connection for a purpose for which it was designed.

Regarding claim 3, the system of claim 1 is disclosed in Sayers. Claim 3 further specifies the office based transceiver station, radio access gateway, and interworking function are implemented as one element of the telecommunications system, which is not explicitly disclosed in Sayers. However, the system of Sayers has all 3 of these functionalities (figure 2, elements 27 and 23, column 3, lines 42-48, and column 18, lines 56-60). It would have been obvious to one skilled in the art at the time of the invention to put all these functionalities into one element. The motivation would be to consolidate multiple functionalities into one piece of hardware. That the GSM connections are data calls is not specifically disclosed in Sayers. However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GSM connection for a purpose for which it was designed.

Regarding claim 4, the system of claim 1 is disclosed in Sayers. Claim 4 further specifies the radio access gateway and interworking function being implemented as one element of the telecommunications system, which is not explicitly stated in Sayers. However, Sayers does have both of these functionalities (figure 2, element 23, column 3, lines 42-48, and column 18, lines 56-60). It would have been obvious to one skilled in the art at the time of the invention to put these two functionalities into one element. The motivation would be to consolidate multiple functionalities into one piece of hardware. The element being configured to control one or more office-specific base transceiver stations is disclosed in figure 2, element(s) 27 of Sayers. That the GSM

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connections are data calls is not specifically disclosed in Sayers. However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GSM connection for a purpose for which it was designed.

Regarding claim 5, the office-specific base transceiver station, radio access gateway, and interworking function being implemented as separate elements of the telecommunications system is disclosed in Sayers, figure 2, elements 27 and 23, column 3, lines 42-48, and column 18, lines 56-60. The radio access gateway being configured to control one or more office-specific base transceiver stations is disclosed in figure 2, element(s) 27. That the GSM connections are data calls is not specifically disclosed in Sayers. However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GSM connection for a purpose for which it was designed.

Regarding claim 6, said data protocol of the office network is a H.323 standard is disclosed in column 7, lines 31-33, and column 14, lines 61-63. The radio access gateway configured to adapt data frames according to the GSM protocol in the user data into RTP frames is disclosed in column 22, lines 26-27. The interworking function being configured to disassemble said RTP frames and to adapt the user data into frames according to the data protocol of the office network is disclosed in column 18,

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lines 56-60 (the interworking function interfaces between the public and office networks, so it must convert the packets from the protocol of one to the protocol of the other if the two are on different protocols, using RTP as an in-between step) and column 7, lines 27-30 (the public network operates on GSM, the private network operates on IP). That the GSM connections are data calls is not specifically disclosed in Sayers. However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GSM connection for a purpose for which it was designed.

Regarding claim 7, a remote access server configured to function as an interface between the office network and the local area network, and an interworking function being configured to transmit user data adapted to frames according to the data protocol of the office network to the remote access network is disclosed in figure 2, element 25 (the server communicates between the outside world and the private network in the protocol that each network it is connected to can understand). That the GSM connections are data calls is not specifically disclosed in Sayers. However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GSM connection for a purpose for which it was designed.

Regarding claim 9, a terminal registered into the office network being configured to establish a data connection to said remote access server from outside said office network as a VPN connection is disclosed in column 24, lines 25-48.

Regarding claim 10, a method of establishing a data connection in a telecommunications system which comprises an office network and an operator network and a local area network between them is disclosed in Sayers, figure 2, elements 22, 29, and 24. The office network comprising at least one mobile system terminal (figure 2, element 4), a base transceiver station (figure 2, element 27), a radio access gateway controlling the base transceiver station and adapted to have a function connection with the local area network (is disclosed in column 9, lines 33-45, and figure 2, elements 42, the gateways), a call control entity (figure 2, element 29 and column 9, lines 37-40, the overall connection unit, which consists of a hub and router that control communication between the private BTSs and the gateways), and an interworking function to which a signaling connection from said call control entity is arranged (column 18, lines 56-60) are disclosed in Sayers. Controlling said radio access gateway by the call control entity through a signaling connection is disclosed in column 10, line 66-column 11, line 2. Detecting the establishment of an internal connection in the office network by said call control entity, which data connection uses a GSM protocol and adapting data connections according to the GSM protocol and coming from the radio access gateway are adapted to the data protocol according to said office network, in response to the fact that the call control entity detects the establishment of an internal GSM connection in the office network, at least the second party of the data connection being said GSM

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terminal is disclosed in column 18, lines 56-60 and column 9, lines 54-58 (the private and public networks both use GSM). Adapting the data transmission between the office network and a public land mobile network together in said operator network is disclosed in figure 2, element 29 (it interfaces between the office and public networks). That the GSM connections are data calls is not specifically disclosed in Sayers. However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GMS connection for a purpose for which it was designed.

Regarding claim 11, the system comprising a location database for registering terminals belonging to the office network and for managing location and subscriber information is disclosed in column 5, lines 1-12. Authenticating the subscriber of the terminal in the call control entity in response to the data connection establishment request made by the terminal is disclosed in column 5, lines 24-32. Directing the radio access gateway to route the data connection to said interworking function in response to the fact that said subscriber of the terminal is registered into the office network is disclosed in column 19, lines 57-column 20, line 55 (if a subscriber is registered, the call is handled in the private network, which includes the interworking functionality). Directing the radio access gateway to rout the data connection through the operator network to a switching center of the public land mobile network in response to the fact that the subscriber of the terminal is not registered into the office network is disclosed in

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column 21, lines 8-18 (the call is routed to the P-BTS serving the public mobile station).

That the GSM connections are data calls is not specifically disclosed in Sayers.

However, Sayers does disclose in column 3, lines 8-10, that GSM is fundamentally designed for circuit-switched data transport. It would have been obvious to one skilled in the art at the time of the invention to connect GSM data calls in the system of Sayers. The motivation would be to use the GMS connection for a purpose for which it was designed.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sayers in view of Gossman. The method of claim 7 is disclosed in Sayers. Claim 8 further specifies a terminal registered into the office network being configured to establish a data connection to said remote access server from outside said office network as a dial-up connection, which is missing from Sayers. However, Gossman discloses, in column 6, lines 20-31, discloses dialing into a private network, here, one belonging to as ISP. It would have been obvious to one skilled in the art at the time of the invention to allow a registered terminal to dial into the private network. The motivation would be to give the registered terminal a widely available method of connecting to the network.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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